

AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior versions and listings of claims in the above-referenced application:

1 1. (Currently amended) A system for converting first and second
2 signals representative of payload and supervisory information, respectively, between
3 an electrical format and a WDM aggregated optical format, the system including:

4 at least one first converter for converting said first signal between said
5 electrical format and a first, disaggregated optical format,

6 at least one second converter for converting said second signal between said
7 electrical format and a second, disaggregated optical format, and

8 at least one optical WDM converter for converting said first and second
9 signals between said first and second disaggregated optical formats and said WDM
10 aggregated optical format, wherein at least one of said at least one first converter, said
11 at least one second converter and said at least one optical WDM converter are in a
12 hermetic enclosure and wherein said at least one first converter, said at least one
13 second converter and said at least one optical WDM converter are integrated to a
14 single self-contained module by means of signal propagation paths that are exempt
15 from splices and wherein at least one of the first converter, the second converter and
16 the optical WDM converter are mounted on a thermoelectric cooler.

1 2. (Previously presented) The system of claim 1, wherein said first
2 converter and said second converter have associated signal processing electronics,
3 said signal processing electronics being integrated to said single self-contained
4 module, said signal processing electronics generating said first and said second
5 signals representative of said payload and said supervisory information, in said
6 electrical format.

1 3. (Previously presented) The system of claim 1, wherein said optical
2 WDM converter includes a beam splitter.

1 4. (Previously presented) The system of claim 3, wherein said beam
2 splitter has associated an optical connector for conveying said first and said second
3 signals in said WDM aggregated optical format, and wherein said beam splitter is
4 arranged to transfer optical radiation between said first converter and said optical
5 connector.

1 5. (Previously presented) The system of claim 3, wherein said beam
2 splitter has associated an optical connector for conveying said first and said second
3 signals in said WDM aggregated optical format, and wherein said beam splitter is
4 arranged to define an optical signal reflection path between said second converter and
5 said optical connector.

1 6. (Previously presented) The system of claim 3, wherein said beam
2 splitter has associated radiation focusing elements interposed between said beam
3 splitter and said first and said second converter.

1 7. (Previously presented) The system of claim 4, further including a
2 focusing element interposed between said beam splitter and said optical connector for
3 focusing onto said optical connector optical radiation propagating from said beam
4 splitter.

1 8. (Previously presented) The system of claim 7, further including an
2 optical isolator interposed between said beam splitter and said further focusing
3 element.

1 9. (Previously presented) The system of claim 1, wherein said first
2 converter and said second converter include laser sources driven with said first and
3 said second signals in said electrical format, respectively, and wherein said optical
4 WDM converter includes a WDM combiner to combine said first and said second
5 signals in said first disaggregated optical format and said second disaggregated

6 optical format to produce said WDM aggregated optical format, the system thus
7 comprising a transmitter module.

1 10. (Previously presented) The system of claim 1, wherein said optical
2 WDM converter includes a WDM splitter for de-multiplexing said WDM aggregated
3 optical format into said first disaggregated optical format and said second
4 disaggregated optical format, and wherein said first converter and said second
5 converter include photoelectric converters for converting said first disaggregated
6 optical format and said second disaggregated optical format into said first and second
7 signals in said electrical format, the system thus comprising a receiver module.

1 11. (Previously presented) The system of claim 1, further including:
2 a pair of said first converters in the form of a first laser source and a first
3 photoelectric converter, respectively;

4 a pair of said second converters in the form of a second laser source and a
5 second photoelectric converter, respectively; and

6 a pair of said optical WDM converters, in the form of a WDM combiner and a
7 WDM splitter, respectively;

8 such that said first laser source and said second laser source are arranged for
9 converting a first pair of first and second signals representative of payload and
10 supervisory information, respectively, from said electrical format into a first pair of
11 first disaggregated optical format and second disaggregated optical format signals and
12 said WDM combiner is adapted to convert said first pair of first and second
13 disaggregated optical format signals into a first WDM aggregated optical format
14 signal, and wherein said WDM splitter is adapted to convert a second WDM
15 aggregated optical format signal into a second pair of first and second disaggregated
16 optical format signals, and said first photoelectric converter and said second
17 photoelectric converter are adapted to convert said second pair of first and second
18 disaggregated optical format signals into a second pair of first and second signals
19 representative of payload and supervisory information in said electrical format, the
20 system thus comprising a transceiver module.